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United States Environmental Protection Agency
Region V
POLLUTION REPORT

Date: Friday, September 30, 2005
From: Verneta Simon, On-Scene Coordinator

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Subject: #1 & Final POLREP
Lindsay Light II OU 11
160 East Illinois Street, Chicago, IL
Latitude: 41.8911
Longitude: -87.6233

POLREP No.:	1	**Site #:**	05YT
Reporting Period:		**D.O. #:**	
Start Date:	2/11/2005	**Response Authority:**	CERCLA
Mob Date:		**Response Type:**	
Completion Date:	7/29/2005	**NPL Status:**	Non NPL
CERCLIS ID #:		**Incident Category:**	
RCRIS ID #:		**Contract #**	

Site Description

The Lindsay Light II Site/OU 11 is a building formerly called the "Kieffer Building", which was recently demolished. This property will now be developed as a mixed residential and retail complex called "Avenue East". This building was located directly South of and extends into an alley behind the Lindsay Light Building (AKA Lindsay Light I Site or 161 East Grand). OU 11 is also immediately West of the Lindsay Light II/Grand Pier Site, 227 East Grand. Due to its proximity to these other thorium-contaminated sites, U.S. EPA believed a radiological investigation of the 160 East Illinois building site including adjacent alley and sidewalk rights-of-ways, was warranted.

Initial measuremens by the developer's contractor did not find any thorium contamination under the sidewalks to the south and east, nor in the alley to the north. One area of elevated radiation reading inside the building were attributed to brick, not contamination.

Later measurements by a different radiation contractor, for the devoloper, showed two definite areas of elevated radioactivity inside the building. These were confirmed by the U.S. EPA. After consideration, U.S. EPA determined these areas did not present an unacceptable risk to human health or the environment.

In addition, the developer had to excavate outside their property boundary, in City of Chicago property, along the south half of the alley adjacent to the Lindsay Light Building. Thorium contamination was found. Approximately 8 cubic yards (15 tons) of thorium-impacted soil was excavated and shipped to Envirocare of Utah. Prior to truck loading, an area was identified as having a gamma count reading of 680,000 counts per minute (cpm). The clean-up criterion of 7.1 picoCuries per gram (pCi/g), total radium (Ra-226 + Ra-228) equates to 17,348 cpm. A sample collected from this high gamma area was analyzed twice and found to be 360-371 pCi/g, total radium.

On July 18, 2005, an Action Memorandum was signed for this site. An Admiministrative Agreement and Order by Consent (AAOC) was sent on July 6, 2005 to the developer, however, they declined to execute because no contamination was found within the property to which they held title. They did not hold title to the alley.

Next Steps

This remediation will be reported to the City of Chicago Department of Environment as part of the right-of-way permit requirement. It would be prudent for the City of Chicago to note in their permit system database that there is a potential to encounter radioactive materials in the alley to the east and west of St. Clair, between Illinois Street and Grand Avenue.

U.S. EPA will receive a formal report from either the owner or developer documenting actions taken.

Key Issues

On July 21, 2000, Mark Goodman & Associates, Inc., the former 160 East Illinois majority owner, surveyed the then-existing Kieffer Building at this property, using the services of Bain Environmental and Radiation Safety Services, Inc. (RSSI). RSSI found a single area of slightly elevated radiation attributed to "brickwork" but reported no other areas in the building exhibiting radiological anomalies. On August 16, 2000, RSSI made six down-hole measurements and soil boring samples from the sidewalk rights-of-ways and alley. According to RSSI, the measurements and analyses did not indicate the presence of thorium contamination. RSSI stated in a letter dated January 6, 2003, on behalf of the owner that "[w]e will contact you if changes are made in the building....."

On February 11, 2005, after the Kieffer Building had been partially demolished, U.S. EPA requested a meeting with the new majority owner, Residential Homes of America (Mark Goodman & Associates retained an interest in the property), the construction management company, The Rise Group, and consultants, RSSI and GeoSyntec, to discuss the additional radiological surveillance of the remaining building at 160 East Illinois. Subsequently, the building owner engaged Stan Huber & Associates ("Huber") to perform additional radiation surveillance. Huber surveyed the remaining portions of the Kieffer Building on February 16 and 17, 2005, and identified two areas of elevated gamma readings. On February 18, 2005, U.S. EPA conducted a radiological survey of the building using a portable multi-channel analyzer, Berkley Nucleonics SAM 935 Portable Gamma Spectroscopy (SAM). The SAM confirmed the presence of thorium in the two areas of elevated gamma readings identified by Huber.

The two areas identified by U.S. EPA and Huber, were appproximately 6 inches to 12 inches in diameter. U. S. EPA determined that the small areas of contamination did not present an unacceptable risk to human health or the environment. In addition, U.S. EPA and Huber surveyed the building timbers which were to be recycled. The timbers surveyed were not radioactively contaminated.

On July 6, 2005, during excavation outside the perimeter of the foundation wall of the 160 East Illinois property, the owner's contractor staff notified U.S. EPA that they had encountered elevated gamma radiation levels in the alley that separates this property from the 161 East Grand Avenue property (Lindsay Light Building AKA Lindsay Light I Site or 161 East Grand) to the north. On July 7, 2005, U.S. EPA confirmed elevated gamma radiation levels on the south side of the alley, near St. Clair Street, in an area about 10 feet long and about 2 feet wide. Contaminated soil was below concrete under the alley's blacktop and brick pavers. Using the SAM, thorium radionuclides (thorium-232, thallium-208) and a uranium radionuclide (bismuth-214) were identified in-situ at the peak gamma reading spot. Using a two by two sodium iodide probe, the peak gamma reading spot was determined to be 680,000 cpm. The clean-up criterion in the Streeterville area is 17,348 cpm or 7.1 pCi/g, total radium. Samples collected from this peak gamma location were analyzed by U.S. EPA's National Air and Radiation Environmental Laboratory (NAREL) and determined to be 360-371 pCi/g, total radium, much above the U.S. EPA soil clean-up criterion of 7.1 pCi/g.

After the thorium-contaminated soil was removed, a verification sample was collected by U.S. EPA. Our verification sample was composed of five 20-milliliter vials, which showed an average total radium concentration of 1.79 pCi/g.

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
Intramural Costs				
Total Site Costs	$0.00	$0.00	$0.00	0.00%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

Disposition of Wastes

Approximately 8 cubic yards (15 tons) of thorium-contaminated soil was excavated and shipped to the Envirocare Facility in Clive, Utah for disposal. Transportation and disposal was handled by Kerr-McGee Chemical, LLC.